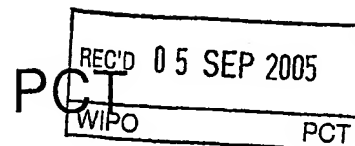


# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY



To:

see form PCT/ISA/220

22/a

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/B2005/050626

International filing date (day/month/year)  
21.02.2005

Priority date (day/month/year)  
03.03.2004

International Patent Classification (IPC) or both national classification and IPC  
H04L12/56

Applicant  
KONINKLIJKE PHILIPS ELECTRONICS N.V.

### 1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

### 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

### 3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/IB2005/050626

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**Box No. I Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material:
    - ☐ in written format
    - ☐ in computer readable form
  - c. time of filing/furnishing:
    - ☐ contained in the international application as filed.
    - ☐ filed together with the international application in computer readable form.
    - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/IB2005/050626

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or  
Industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

Novelty (N)	Yes: Claims	1-13
	No: Claims	
Inventive step (IS)	Yes: Claims	1-13
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-13
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**Re Item V.**

1 Reference is made to the following documents:

D1 : MITTAL A ET AL: "Dynamic real-time channel establishment in multiple access bus networks" COMPUTER COMMUNICATIONS, ELSEVIER SCIENCE PUBLISHERS BV, AMSTERDAM, NL, vol. 26, no. 2, 1 February 2003 (2003-02-01), pages 113-127.

2 INDEPENDENT CLAIM 1:

Document D1, which is considered to represent the most relevant state of the art, discloses (the references in parentheses applying to this document):

A data processing circuit comprising:

- a network that is operable in successive time-slots (page 115, left column, lines 6 to 41);
- a plurality of data processing units interconnected by the network (page 115, right column, lines 33 to 34), and arranged to send streams of messages concurrently through the network, each stream comprising messages that occupy shareable resources in the network (page 114, right column, lines 26 to 32)...;
- node circuits in the network, ..., the node circuits being arranged to decide whether to forward or discard each message dependent on a measure of seniority of the message in its particular stream, each particular node circuit being arranged to prevent forwarding of a more junior message in the particular stream for which insufficient resources are left because of forwarding of a more senior message from another stream from the particular node circuit (page 188, left column, line 37 to right column, line 32).

From this, the subject-matter of independent claim 1 differs in that each stream comprises messages that occupy shareable resources in the network in a periodically repeating selection of successive time-slots, a period of repetition being the same for all the streams and in that the node circuits being arranged to forward the messages along multi-node paths through the network, each particular stream being assigned a respective stream specific path along which the node circuits forward all messages of the particular stream;

**2.1 The subject-matter of claim 1 is therefore novel (Article 33(2) PCT)**

The solution as defined by differing features of claim 1 solves the problem of how to provide for a circuit of data processing units with an interconnecting network, in which the network provides guaranteed access to successive messages of a stream of data, once the stream has been established, without requiring storage of information about the stream in node circuits of the network (see description, page 2 lines 22 to 25).

**2.2 The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:** None of the document cited in the search report disclose or suggest such solution. Although D1 proposed a protocol in which each stream comprises messages that occupy shareable resources in the network in a periodically repeating selection of successive time-slots, a period of repetition being the same for all the streams (see D1, page 118, left column, lines 5 to 24) there is no suggestion of combining this protocol with the protocol forwarding or discarding each message depending on a measure of seniority of the message in its particular stream... also cited in D1 (page 188, left column, line 37 to right column, line 32). Moreover, the node circuits being arranged to forward the messages along multi-node paths through the network... are also not disclosed in D1.

**2.3 Claims 2-10 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.**

**3 INDEPENDENT CLAIM 11:**

The same reasoning as in paragraphs 2 to 2.2 applies, *mutatis mutandis*, to the subject-matter of the corresponding independent claim 11, which therefore is also considered new and inventive.

**3.1 Claims 12, 13 are dependent on claim 11 and as such also meet the requirements of the PCT with respect to novelty and inventive step.**